

DaimlerChrysler AG

Patent Claims

- 5 1. A heat exchanger for cooling gaseous or liquid media, particularly an exhaust heat exchanger for an internal combustion engine, with a tubular housing which has at least one inlet opening with an adjoining annular duct for the distributed flow
10 of a cooling medium into the interior of the housing, characterized in that the annular duct (10) is formed on the outside of the housing (2) by a duct housing (9) surrounding a housing section at a distance, the annular duct (10) being
15 connected to the housing interior via passage openings (13 to 16) distributed over the circumference of the housing (2).
- 20 2. The heat exchanger as claimed in claim 1, characterized in that the inlet opening (11) is arranged on the duct housing (9) and has a connecting branch (12) for a hose line.
- 25 3. The heat exchanger as claimed in claim 1, characterized in that the duct housing (9) is formed as a single piece with the heat exchanger housing (2).
- 30 4. The heat exchanger as claimed in claim 1, characterized in that the duct housing (9) is connected tightly to the heat exchanger housing (2) by welding or soldering.
- 35 5. The heat exchanger as claimed in claim 1, characterized in that the passage openings (13 to 16) are designed as slots which extend at an axial distance from one another over part of the housing

circumference and, together with the duct housing (9) having a corrugated tube section (20), form an expansion element (18).

- 5 6. The heat exchanger as claimed in claim 1,
characterized in that next to the corrugated tube
section (20) the duct housing (9) has a
cylindrical housing part (19) which adjoins in the
axial direction and on which the inlet opening
10 (11) with the inlet branch (12) is arranged.
7. The heat exchanger as claimed in claim 1,
characterized in that the housing (2) is provided
at the ends on the longitudinal sides with a
15 respective flange (3, 4) for the connection of an
exhaust pipe, and in that the expansion element
(18) is provided at that end of the housing (2)
which lies on the exhaust gas inflow side (5).
- 20 8. The heat exchanger as claimed in claim 1,
characterized in that the duct housing (2) is
designed as a sheet-metal part which is connected
tightly at one end to the housing (2) and at the
other end to the flange (3) on the entry side.
- 25 9. The heat exchanger as claimed in claim 1,
characterized in that the expansion element (18)
is surrounded by a protective covering (21).